REMARKS

In response to the Office Action of October 8, 2008, please reconsider the present application in view of the following remarks. Applicant thanks the Examiner for carefully considering the application.

Status of Claims

Claims 1-21 are currently pending. Claims 1, 8, and 12 are independent.

Claims 1-3 and 5-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,738,978 ("Hendricks") in view of U.S. Patent No. 6,088,722 ("Herz") and further in view of U.S. Patent No. 7,003,792 issued to Yuen ("Yuen"). Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks in view of Herz and further in view of Yuen, in further view of U.S. Patent Pub. No. 2005/0193410 for Eldering ("Eldering"). Claims 8-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,798,785 issued to Hendricks ("Hendricks 785") in view of U.S. Patent No. 6,177,931 issued to Alexander ("Alexander"). Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks 785 in view of Alexander and further in view of U.S. Patent No. 5,801,747 issued to Bedard ("Bedard"). Claims 12, 13, 15-18 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks in view of Yuen. Claims 14 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks in view of Yuen and further in view of Herz. Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks in view of Yuen, Alexander and further in view of Herz, and

further in view of "A tutorial on Hidden Markov Models and Selected Applications in Speech Recognition" by Rabiner et al. ("Rabiner").

Rejection under 35 U.S.C. § 103(a)

Claims 1-3 and 5-7

Claims 1-3 and 5-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks in view of Herz, further in view of Yuen. The rejection is respectfully traversed because Hendricks, Herz and Yuen, whether considered separately or in combination, fail to show or suggest the claimed limitations.

According to MPEP §2142

> [t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that 'rejections on obviousness cannot be sustained with mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.' *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR*, 550 U.S. at __, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval).

Further, according to MPEP §2143, "[T]he Supreme Court in *KSR International Co. v. Teleflex, Inc.* 550 U.S. ___, ___, 82 USPQ2d 1395-1397 (2007) identified a number of rationales to support a conclusion of obviousness which are consistent with the proper "functional approach" to the determination of obviousness as laid down in *Graham*."

And, according to MPEP §2143.01, [o]bviousness can be established by combining or

modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006). Further, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art." *KSR International Co. v. Teleflex, Inc.* 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007). Additionally, according to MPEP §2143

> [a] statement that modification of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Pat. App. & Inter. 1993).

Independent claim 1 requires, in part,

> a server-side system for evaluating television behavioral viewing data from *a plurality of users and for categorizing the data into category groups*; *a clustering engine included in the server-side system for receiving the television behavioral viewing data, processing the television behavioral viewing data , and generating user profiles targeting the category groups*; a client-side system coupled to the server-side system and adapted to classify a television user into at least one of the category groups *based on advertising category prototypes received from the clustering engine*; *a contextual behavioral profiling agent included in the client-side system for deriving profiling information related to a television user's viewing behavior with content and usage-related preferences*; and a behavioral model database for storing in the client-side system the profiling information derived by the profiling agent (emphasis added).

Hendricks discloses a headend (i.e., server) that gathers data from each set top terminal and compiles demographic information and program watched information from each of the set top terminal terminals (i.e., clients). Based on the information received and the compiled demographics and watched information, the headend generates advertising packages and targets each set top terminal. That is, based on received information from a set top terminal, the set top terminal is categorized at the headend to determine targeted advertising to send to the set top terminal. Therefore, the set top terminal does not need to determine anything as the headend is making the determination of content to target the set top terminal with. Thus, Hendricks does not teach, disclose or suggest "a client-side system coupled to the server-side system and adapted to *classify a television user into at least one of the category groups based on advertising category prototypes received from the clustering engine*" (emphasis added).

Herz discloses an agreement matrix is created for each viewer from customer profiles stored at the headend and content profiles of the video programming to be transmitted. The video programming is then limited to content based on a particular customer's profile to determine content to be delivered to each customer. Herz has nothing to do with using other user's information for determining targeted content to deliver to a set top terminal.

Herz further discloses that the memory requirements at the set top terminal are minimized by limiting the amount of data that is transmitted to the set top terminal and by maintaining the profile and creating the agreement matrix at the headend (Herz, col.42,

lines 54-67). Similar as with Hendricks, a determination of content to target a user is made at the headend. Additionally, because Herz teaches reducing memory requirements at the set top terminal, Herz teaches away from "a client-side system coupled to the server-side system and adapted to classify a television user into at least one of the category groups *based on advertising category prototypes received from the clustering engine*" (emphasis added), as required, in part, by amended claim 1.

Hendricks in view of Herz does not teach, disclose or suggest that advertising category prototypes are received at the set top terminal from the headend. Further, all determinations of targeted content are made at the headend in both Hendricks and Herz. Therefore, Hendricks in view of Herz cannot teach, disclose or suggest that a client-side system is "adapted to classify a television user into at least one of the category groups *based on advertising category prototypes received from the clustering engine*" (emphasis added).

And, the evaluation information that is used by Hendricks in determining targeted content of users is not related to "evaluating television *behavioral viewing data* from *a plurality of users*" (emphasis added). That is, demographics and watched information is not behavioral viewing data as the term "behavioral" relates to the way in which an individual views programming.

Yuen discloses a smart agent residing locally on a client device that integrates a user's habits, statistics and psycho-demographic information based on Internet use (e.g.,

websites visited, blogs, chats, etc.) of an Internet user to infer a user's profile. Yuen has nothing to do with a television user. Further, in Yuen, no other Internet user's information is required to determine a user's personal profile used to target the user with lists of Internet websites that may be interesting to the user. Moreover, Yuen does not teach, disclose or suggest that a user is classified into a category group based on anything, let alone *advertising category prototypes received from a clustering engine*. Therefore, Yuen does not teach, disclose or suggest "a client-side system coupled to the server-side system and adapted to classify a television user into at least one of the category groups *based on advertising category prototypes received from the clustering engine*" (emphasis added).

Further, any combination of Hendricks, Herz and Yuen does not teach, disclose or suggest "*a contextual behavioral profiling agent included in the client-side system for deriving profiling information related to a television user's viewing behavior with content and usage-related preferences*" (emphasis added). That is, Hendricks, Herz and Yuen use information on viewed content, but not behavioral context and usage related preferences, such as programming viewing transitions, duration viewed, time of viewing, etc.

Additionally, if Herz incorporates any client-side determinations, inclusion of a contextual behavioral profiling agent in the client-side, or a behavioral model database that is stored in the client-side, it would change the principle of operation as memory requirements on the client-side would not be minimized (see MPEP 2143.01 VI, "[i]f the

proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)).

Moreover, by viewing the disclosures of Hendricks, Herz and Yuen, one cannot jump to the conclusion of obviousness without impermissible hindsight. According to MPEP 2141.01, "[t]he requirement 'at the time the invention was made' is to avoid impermissible hindsight."

> '[i]t is difficult but necessary that the decisionmaker forget what he or she has been taught … about the claimed invention and cast the mind back to the time the invention was made (often as here many years), to occupy the mind of one skilled in the art.' W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

Applicant submits that without first reviewing Applicant's disclosure, no thought, whatsoever, would have been made to

> a client-side system coupled to the server-side system and adapted to classify a television user into at least one of the category groups *based on advertising category prototypes received from the clustering engine*; *a contextual behavioral profiling agent included in the client-side system for deriving profiling information related to a television user's viewing behavior with content and usage-related preferences*; and a behavioral model database for *storing in the client-side* system the profiling information derived by the profiling agent (emphasis added).

Even if Hendricks is combined with Herz and Yuen, the result would fail to teach or suggest

> a server-side system for evaluating television behavioral viewing data from *a plurality of users and for categorizing the data into category groups*; *a clustering engine included in the server-side system for receiving the television behavioral viewing data, processing the television behavioral viewing data , and generating user profiles targeting the category groups*; a client-side system coupled to the server-side system and adapted to classify a television user into at least one of the category groups *based on advertising category prototypes received from the clustering engine*; *a contextual behavioral profiling agent included in the client-side system for deriving profiling information related to a television user's viewing behavior with content and usage-related preferences*; and a behavioral model database for storing in the client-side system the profiling information derived by the profiling agent (emphasis added).

Further, the assertions made in the Office Action on page 3 that lead to a conclusion of obviousness are not explicit and the basic requirements of an articulated rationale under MPEP §2142 cannot be found. Additionally, since neither Hendricks, Herz, Yuen, and therefore, nor the combination of the three, teach, disclose or suggest all the limitations of amended claim 1, as listed above, amended claim 1 is not obvious over Hendricks in view of Herz, and further in view of Yuen since a *prima facie* case of obviousness has not been met under MPEP §2143. Additionally, the claims that directly or indirectly depend from amended claim 1, namely, claims 2, 3 and 5-7, would also not be obvious over Hendricks in view of Herz, and further in view of Yuen for at least the same reason.

Accordingly, withdrawal of the rejection of claims 1-3 and 5-7 is respectfully requested.

Claim 4

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks in view of Herz further in view of Yuen, and further in view of Eldering. The rejection is respectfully traversed because for at least the following reasons, Hendricks, Herz, Yuen and Eldering, alone or combined, fail to show or suggest the claimed limitations.

Claim 4 depends from amended claim 1 and includes all the limitations of claim 1. More specifically, claim 4 also has the limitation of "behavioral profiling." As discussed above, Hendricks in view of Herz and Yuen does not teach, disclose or suggest amended claim 1 limitations of

> a server-side system for evaluating television behavioral viewing data from *a plurality of users and for categorizing the data into category groups*; *a clustering engine included in the server-side system for receiving the television behavioral viewing data, processing the television behavioral viewing data , and generating user profiles targeting the category groups*; a client-side system coupled to the server-side system and adapted to classify a television user into at least one of the category groups *based on advertising category prototypes received from the clustering engine*; *a contextual behavioral profiling agent included in the client-side system for deriving profiling information related to a television user's viewing behavior with content and usage-related preferences*; and a behavioral model database for *storing in the client-side* system the profiling information derived by the profiling agent (emphasis added).

Eldering, like Hendricks, Herz and Yuen discussed above, also fails to show or suggest at least the above-mentioned claimed limitations, and fails to supply what is missing in Hendricks, Herz and Yuen. Further, Eldering is, in fact, completely silent

with respect to "behavioral profiling" as required by claim 4. This is also evidenced by the fact that Eldering was relied upon by the Examiner merely to supply a specific clustering engine.

In view of the above, Hendricks, Herz, Yuen and Eldering, whether considered separately or in any combination, fail to show or suggest all of the limitations of claim 4. Thus, claim 4 of the present application is patentable over Hendricks, Herz, Yuen and Eldering for at least the reasons set forth above.

Accordingly, withdrawal of the rejection of claim 4 is respectfully requested.

Claims 8-10

Claims 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks 785 in view of Alexander. The rejection is respectfully traversed because for at least the following reasons, Hendricks 785 and Alexander, alone or combined, fail to show or suggest the claimed limitations.

Independent claim 8 of the present application requires, in part, a client-side device for recording "contextual *transition behaviors* profiling" the user to continually build a user profile of preferences and contextual transition behaviors associated with the user. Further, amended claim 8 requires, in part, "a program distributing device at the head-end side for providing to the user the program content in accordance with the user profile, wherein *a user is classified at the client-side into at least one category group*

based on advertising category prototypes received from the head-end side" (emphasis added). In the Office Action the Examiner asserts that the microprocessor 602 of Hendricks 785 records "contextual transition behaviors." Applicant respectfully disagrees. Hendricks 785, in col. 29, lines 26-43, discloses recording "clues" such as "programs watched and time periods of television viewing."

Such clues, however, are not equivalent to the "contextual *transition* behaviors" of the claimed invention. The concept of "transition," as clearly defined in the specification of the present application, is completely different from the static recording of "programs watched and time periods of television viewing." Rather, referring to, *e.g.*, paragraphs [0036], [0037], [0063], [0064] and [0069] of the publication (Pub. No. 2003/0101451) of the current application No. 10/043,714, "transition" is a dynamic concept including, for example, transition *events* and *state* transitions. More specific examples of the "transition" include regular program and Ad *transitions*. Advantageously, the claimed invention can use program arrival and departure *frequency* and *click timing* as preference indicators (*see*, *e.g.*, paragraph [0007] of the published application), which is an intelligent process as compared to rudimentary systems where only "programs watched and time periods of television viewing" are recorded.

For example, two television users A and B both watch CNN for one hour a day, and both watch ABC for two hours a day. In the system of Hendricks 785, users A and B would have exactly the same profile because each of them watches CNN and ABC ("programs watched") for one hour and two hours ("time periods of television viewing"),

respectively. However, user B may be switching back and forth many times between CNN and ABC during the same 3 hours. Such a behavior is obviously different from that of user A, but cannot be discerned by the system of Hendricks 785. Thus, contrary to the Examiner's assertions, Hendricks 785 fails to show or suggest the claimed invention as recited in independent claim 8, particularly the "contextual *transition behaviors* profiling" limitation of the present application.

Alexander, like Hendricks 785 discussed above, also fails to show or suggest the above-mentioned limitations, or to supply what is missing from Hendricks 785. This is also evidenced by the fact that Alexander was relied upon by the Examiner merely to supply a device for providing to the one or more users the program content in accordance with the user's demographic information.

Moreover, Hendricks 785 discloses server side determinations made for targeting content, which is distinguishable from "*a user is classified at the client-side into at least one category group*" (emphasis added). Further, Hendricks in view of Alexander does not teach "*advertising category prototypes received from the head-end side*" (emphasis added). Therefore, Hendricks in view of Alexander cannot possibly teach that "a user is classified at the client-side into at least one category group *based on advertising category prototypes received from the head-end side*" (emphasis added).

In view of the above, Hendricks 785 and Alexander, whether considered separately or in combination, fail to show or suggest the claimed invention as recited in

independent claim 8 of the present application. Thus, independent claim 8 of the present application is patentable over Hendricks 785 and Alexander for at least the reasons set forth above. Dependent claims 9 and 10 are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 8-10 is respectfully requested.

Claim 11

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks 785 in view of Alexander further in view of Bedard. The rejection is respectfully traversed because for at least the following reasons, Hendricks 785, Alexander, and Bedard, whether considered separately or in any combination, fail to show or suggest all the claimed limitations.

Claim 11 depends from claim 8 and includes all the limitations of claim 8. As discussed above, Hendricks 785 and Alexander fail to show or suggest all the limitations, particularly the claimed "contextual transition behavioral profiling" and "a program distributing device at the head-end side for providing to the user the program content in accordance with the user profile, *wherein a user is classified at the client-side into at least one category group based on advertising category prototypes received from the head-end side*" (emphasis added). Bedard, like Hendricks 785 and Alexander discussed above, also fails to show or suggest all the limitations of claim 11, or to supply what is missing in Hendricks 785 and Alexander. Bedard is, in fact, completely silent with respect to the claimed "*contextual transition behavioral* profiling" (emphasis added).

This is further evidenced by the fact that Bedard was relied upon by the Examiner merely to supply a preference engine. Thus, claim 11 of the present application is patentable over Hendricks 785, Alexander, and Bedard for at least the reasons set forth above.

Accordingly, withdrawal of the rejection of claim 11 is respectfully requested.

Claims 12, 13, 15-18 and 21

Claims 12, 13, 15-18 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks in view of Yuen. The rejection is respectfully traversed because for at least the following reasons, Hendricks and Yuen, alone or combined, fail to show or suggest the claimed limitations.

Independent claim 12 of the present application requires, in part, a knowledge base acquirer outputting a knowledge base in the form of a "*transition* matrix" and "*a user is classified into at least one demographic group based on advertising category prototypes transmitted from the head-end side*" (emphasis added). Hendricks and Yuen, alone or in combination, fail to show or suggest at least such limitations.

Similarly as discussed above with regards to claim 1, Hendricks discloses the determinations and decisions of content targeting are only handled at the headend. Yuen only relates to determining Internet websites to suggest to a user that are only based on the user's profile, which is only handled on the client side. The teachings of Hendricks and Yuen have completely different purposes and the combination would have to change

the principle of operation of either invention, which is not sufficient to render claim 12 *prima facie* obvious.

Moreover, neither Hendricks, Yuen, nor any combination of the two, teach "*advertising category prototypes transmitted from the head-end side*" (emphasis added). Thus, Hendricks and Yuen, whether considered separately or in any combination, fail to show or suggest the claimed invention as recited in independent claim 12 of the present application. Thus, independent claim 12 of the present application is patentable over Hendricks and Yuen. Dependent claims 13, 15-18, and 21 are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 12, 13, 15-18, and 21 is respectfully requested.

Claims 14 and 19

Claims 14 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks in view of Yuen, and further in view of Herz. The rejection is respectfully traversed because for at least the following reasons, Hendricks, Yuen and Herz, alone or combined, do not show or suggest all of the claimed limitations.

Claims 14 and 19 depend from independent claim 12 and include all the limitations of claim 12. As discussed above with respect to claim 12, Hendricks and Yuen fail to show or suggest all the limitations of claims 14 and 19. Herz, like Hendricks

and Yuen discussed above, also fails to show or suggest all of the limitations of claim 12 more particularly the "*transition* matrix" and "*a user is classified into at least one demographic group based on advertising category prototypes transmitted from the head-end side*" (emphasis Added), as claimed, or to supply that which Hendricks and Yuen lack. Thus, Hendricks, Yuen and Herz, whether considered separately or in any combination, fail to show or suggest all the limitations of claims 14 and 19. Thus, claims 14 and 19 are patentable over Hendricks, Yuen and Herz for at least the reasons set forth above.

Accordingly, withdrawal of the rejection of claims 14 and 19 is respectfully requested.

Claim 20

Claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendricks in view of Yuen further in view of Herz, and further in view of Rabiner. The rejection is respectfully traversed because for at least the following reasons, Hendricks, Yuen, Herz and Rabiner, alone or combined, do not show or suggest all of the claimed limitations.

Claim 20 depends from claim 12, and includes all the limitations of claim 12. Rabiner fails to supply that which Hendricks, Yuen, and Herz lack with respect to all the limitations of claim 12, particularly the claimed "transition matrix" and "*a user is classified into at least one demographic group based on advertising category prototypes*

transmitted from the head-end side" (emphasis added). This is further evidenced by the fact that Rabiner was relied upon by the Examiner merely to supply random processing. Thus, the cited references cannot possibly show or suggest all the limitations of claim 20.

Furthermore, the fact that the Examiner has used four (4) references to arrive at the claimed invention without properly supplying a motivation to combine the references, and the fact that the references are combined despite that Rabiner is directed to applications in speech recognition and Yuen is directed to profiling a user's Internet use, which have nothing to do with television programming, are strong indications that the Examiner, aided with the present application as a road map, has used impermissible hindsight reconstruction to pick and choose among isolated disclosures in the prior art.

Applicant submits that without first reviewing Applicant's disclosure, no thought, whatsoever, would have been made to the claimed "transition matrix" and "*a user is classified into at least one demographic group based on advertising category prototypes transmitted from the head-end side*" (emphasis added).

In view of the above, Hendricks, Yuen, Herz, and Rabiner, whether considered separately or in any combination, fail to show or suggest all the limitations of claim 20 of the present application. In addition, there is no motivation to combine the cited references. Thus, claim 20 is patentable over Hendricks, Yuen, Herz, and Rabiner for at least the reasons set forth above.

Accordingly, withdrawal of the rejection of claim 20 is respectfully requested.

CONCLUSION

In view of the foregoing remarks, Applicant believes that the rejected claims are in condition for allowance. Reconsideration, re-examination, and allowance of the rejected claims are respectfully requested. If the Examiner feels that a telephone interview would help with the examination of the present application, the Examiner is encouraged to call the undersigned attorney or his associates at the telephone number listed below.

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Respectfully submitted,

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